ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Implementation of Section 309(j)	)	PP Docket No. 93-253
of the Communications Act -	)	
Competitive Bidding	)	
Narrowband PCS	)	

PETITION FOR RULEMAKING

David J. Lieto ("Petitioner"), by his attorneys, hereby files this Petition for Rulemaking ("Petition") seeking amendment to Section 1.2110(b)(2) of the Commission's rules. In the Second Report and Order ("Second Order") in this Docket, released on April 20, 1994, the Commission issued general rules pertaining to the auction of radio spectrum, as required under the Omnibus Budget Reconciliation Act of 1993 (the "Budget Act"). As part of that rulemaking, the Commission issued rules giving preferential treatment to certain "designated entities" as mandated by Congress in the Budget Act. The newly adopted Section 1.2110 of the Commission's rules defines those people who qualify as designated entities under the Commission's auction framework. This Petition seeks to amend Section 1.2110(b)(2) to provide that disabled individuals are within the category of "minority group" and are thus entitled to the benefits associated with being a designated entity under the Commission's auction rules. Petitioner is a disabled individual who would benefit from the proposed amendment.

I. THE BUDGET ACT.

The Budget Act amended the Communications Act of 1934 by adding Section 309(j). 47 U.S.C. 309(j). Section 309(j) granted the Commission the authority to use competitive bidding to issue a license or permit when mutually exclusive applications exist. 47 U.S.C. § 309(j)(1). To promote economic opportunity and to disseminate licenses among a wide variety of applicants, Congress mandated that the Commission promulgate competitive bidding regulations that, ". . . ensure that . . . businesses owned by members of minority groups . . . are given the opportunity to participate in the provision of spectrum-based services . . . .." 47 U.S.C. § 309(j)(4)(D).

II. THE COMMISSION'S RULEMAKING IMPLEMENTING THE BUDGET ACT.

The Commission's Second Order in this Docket addressed the mandate contained in 47 U.S.C. § 309(j)(4)(D). It established benefits for designated entities such as bidding credits and tax certificates. See Second Order, ¶¶ 227-297. The Second Order also defined the term "minority groups" by relying on a Commission definition that had been established as early as 1978 and developed in relation to the Commission's Equal Employment Opportunity program in the broadcast service. See Second Order, ¶278, n.209.[1] Specifically, the Commission

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[1] The Commission's current definition of "minority" is also found in the Communications Act at 47 U.S.C. § 309(i)(3)(C). However, that definition is specifically limited to preferences granted to minorities in lotteries for mass media licenses. Accordingly, no provision in the Communications Act limits the Commission's ability to use a different definition of "minority" in other contexts.

defined a minority as a person of, ". . . Black, Hispanic Surnamed, American Eskimo, Aleut, American Indian and Asiatic American extraction." Id. Contrary to the Commission's assertion in the Second Order that there is, ". . . no reason to depart from [its] current definition of the term minority," the Commission should amend its definition of "minority groups" to include disabled Americans.

III. THE DIFFICULTY OBTAINING CAPITAL SUPPORTS INCLUDING DISABLED AMERICANS IN THE DEFINITION OF MINORITY GROUPS.

A. Prior Congressional findings prove that disabled individuals have difficulty accessing capital.

In 1990, Congress passed the Americans with Disabilities Act. Pub.L. 101-336, 104 Stat. 327. As part of that legislation, Congress made important findings regarding the status of disabled Americans. Some of those findings include:

1) Discrimination against individuals with disabilities persists in such critical areas as employment, housing, public accommodations, education, transportation, communication, recreation, institutionalization, health services, voting, and access to public services;

2) Individuals with disabilities continually encounter various forms of discrimination, including outright intentional exclusion, the discriminatory effects of architectural, transportation, and communication barriers, overprotective rules and policies, failure to make modifications to existing facilities and practices, exclusionary qualification standards and criteria, segregation, and relegation to lesser services, programs, activities, benefits, jobs or other opportunities;

3) Census data, national polls, and other studies have documented that people with disabilities, as a group, occupy an inferior status in our society, and are severely disadvantaged socially,

vocationally, economically, and educationally;

42 U.S.C. § 12101(a).

B. Economic statistics support the conclusion that disabled individuals have difficulty accessing capital.

Attached as Exhibit 1 to this Petition is the Disability Statistics Abstract, No. 4, May 1992, written by the Disability Statistics Program of the University of California, San Francisco, and published by the National Institute on Disability and Rehabilitation Research of the Department of Education. Exhibit 2 is an excerpt from John M. McNeil's Americans with Disabilities: 1991-92, U.S. Bureau of the Census, Current Population Reports, P70-33 (1993).

These two publications demonstrate that people with disabilities are more likely to be unemployed. If employed, disabled individuals earn less money per year than their non-disabled counterparts. Approximately 42.3% of severely limited disabled persons are considered poor, while only 12.1% of persons without work disabilities are considered poor, meaning that severely disabled persons live below the poverty level at four times the rate of non-disabled people. Every statistic listed in these publications shows that disabled persons are economically disadvantaged in comparison to the general population. Given this overwhelming propensity, it is reasonable to believe that disabled individuals face difficulty accessing capital for their businesses.

C. The existence of governmental programs indicates that disabled persons have difficulty accessing capital.

The existence of governmental programs that include disabled persons in their scope of protection is further evidence that disabled persons face barriers in accessing capital. For example, the Federal Deposit Insurance Corporation includes the disabled in its analysis of fair lending practices by banks. See Exhibit 3, ABA Banking Journal, Mortgage discrimination: Regulators mean it, August 1993.

In 1989, Maryland passed a bill establishing the Equity Participation Investment Program, a program designed to benefit business development by minorities, women and disabled individuals. See Exhibit 4, 60 Economic Development Review, Maryland Small Business Development Financing Authority's Equity Participation Investment Program, Spring 1989.

The existence of these programs lends further credence to the fact that disabled individuals face difficulties in raising funds to finance their businesses.

D. Individual experience supports the fact that disabled individuals have difficulty accessing capital.

Mr. Urban Miyares has had extensive experience in addressing the barriers faced by disabled entrepreneurs. In 1985, Mr. Miyares founded the Disabled Businesspersons Association, a non-profit organization that provides consulting advice to disabled individuals trying to start

their own business. One common barrier faced by disabled entrepreneurs is discrimination in lending practices. See Exhibit 5, Letter from Urban Miyares to Sean Beatty, with attachments, September 7, 1994, p.2.

Lending practices are affected by the fact that many disabled individuals have little or no prior work experience. Disabled individuals also have higher capitalization costs directly attributable to their disabilities. The difficulty in foreclosing and evicting disabled individuals who have assets to pledge against loans also makes a potential lender less likely to loan funds. Attitudes in the general public regarding a disabled person's ability to run a competitive company further increase the already high barrier disabled individuals face when trying to secure funding for their businesses. Id.

Another disabled entrepreneur, Mr. Mark Eidson, related his experience with accessing capital in the July/August 1992 edition of D&B Reports (See Exhibit 6.) At the time the article was written, Mr. Eidson co-owned a successful business helping people file insurance claims. When seeking funds to start this business, Mr. Eidson was unable to raise any money from banks. Instead, the person who had been an entrepreneur for 15 years and an advisor to the Mexican government had to borrow money from friends to finance his business. Besides perceiving disabled individuals as bad credit risks, banks were not prepared to lend money to a person who had a speech

impairment, according to Mr. Eidson.

As a final example, the Petitioner was unsuccessful in his own attempt to raise money from banks for a telecommunications project he had planned. Having received a license from the FCC for a Multiple Address System, Petitioner prepared a business plan and attempted to secure financing for the project. To date, no bank has offered to loan funds for the project.

Given the personal experiences of three disabled entrepreneurs, which undoubtedly parallel the experiences of many others, it is clear that disabled persons have difficulties accessing capital.

IV. PROPOSED RULE.

The Commission should amend Section 1.2110(b)(2) of its rules to read:

> (2) Businesses owned by members of minority groups and/or women. A business owned by members of minority groups and/or women is one in which minorities and/or women who are U.S. citizens have at least 50.1 percent equity ownership and 50.1 percent controlling interest in the applicant. For applicants that are limited partnerships, the general partner must be a minority and/or woman who is a U.S. citizen (or an entity 100 percent owned by minorities and/or women who are U.S. citizens) that owns at least 50.1 percent of the partnership equity. The interests of minorities and women are to be calculated on a fully-diluted basis; agreements such as stock options and convertible debentures shall be considered to have a present effect on the power to control an entity and shall be treated as if the rights thereunder already have been fully exercised. However, upon a demonstration that options or conversion rights held by non-controlling principals will not deprive the minority and female principals of a substantial financial stake in the venture or impair their rights to control the designated entity, a designated entity may seek a waiver of the requirement

> that the equity of the minority and female principals must be calculated on a fully-diluted basis. The term minority includes individuals of African American, Hispanic-surnamed, American Eskimo, Aleut, American Indian, . . . Asian American, and individuals with disabilities. For purposes of this rule, "individuals with disabilities" shall mean a person who has a physical or mental impairment that substantially limits one or more of the major life activities of such person.

The definition of "individuals with disabilities" used in the proposed rule corresponds to the definition of "disability" contained in the Americans with Disabilities Act. 42 U.S.C. § 12102(2).

V. CONCLUSION.

In passing its rules regarding benefits to women and racially and ethnically owned businesses, the Commission considered access to capital as a justification for the designated entity benefits. Disabled individuals face the same barriers that women and racial and ethnic minorities face when trying to secure capital. Accordingly, the Commission should extend its designated entity benefits to disabled Americans by initiating a rulemaking wherein it proposes an amendment to its rules that permits disabled Americans to participate in the preferences granted to designated entities under its auction rules. To ensure disabled Americans' eligibility for designated entity benefits in as many of the

Commission's auctions as possible, Petitioner requests that the Commission take expedited action on this Petition for Rulemaking.

Respectfully submitted,

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January 3, 1995

EXHIBIT 1

Disability Statistics Abstract

Number 4

People with work disability in the U.S.

An estimated 9% (14.2 million) of working-age people in the United States have some work disability—defined as a limitation in work due to chronic illness or impairment. About 4% (6.3 million) are limited in the amount or kind of work they can perform. Some 5% (7.9 million) have severe work limitation (Table 1), defined by the U.S. Bureau of the Census as not working at all or receiving Medicare or Supplemental Security Income (SSI).

These estimates and others presented here are for civilians aged 16 to 64 and are based on data from the U.S. Current Population Survey (CPS) of people living in households. Estimates are for 1990 (and other years where indicated).

Age and gender

The proportion of people with work disability increases greatly with age: 1.8% of people aged 16 to 24 are limited in the amount or kind of work they can perform, rising to 7.9% of people aged 55 to 64. Similarly, the proportion of people with severe work limitation rises from 1.9% for ages 16 to 24 to 14% for ages 55 to 64.

About 1 person in 11 in the United States has some work disability

Men are more likely to be limited in the amount or kind of work they can do (4.2%) than are women (3.7%). Similarly, a higher percentage of men have severe work limitation (5.2%) than of women (4.8%).

Race and Hispanic origin

Whites and blacks are equally likely to be limited in the amount or kind of work they can do (4.4% each). However, blacks are more likely (11.2%) to have severe work limitation than are whites (4.8%).

About 3% of Hispanics are limited in the amount or kind of work they can do. Unlike whites, blacks and Hispanics are over 2 times as likely to have severe work limitation than to be limited in the amount or kind of work they can perform.

Education

The likelihood of work disability decreases with higher educational attainment. About 4.6% of people who are not high school graduates are limited in the amount or kind of work they can do, followed by 4.3% of high school graduates, 3.7% of people who have only attended college, and 2.9% of college graduates. People who are not high school graduates are 9 times as likely as college graduates (11.5%) to have severe work limitation (1.3%).

People who are not high school graduates are 9 times as likely as college graduates to have severe work limitation

Disability Statistics Program,
University of California,
San Francisco

Published by U.S. Department of Education, National Institute on Disability and Rehabilitation Research (NIDRR)

Number 4, May 1992.

TABLE 1. Work Disability and Demographics: United States, 1990

	Total Persons (1,000s)	With no work limitation Persons (1,000s)	With no work limitation Percent of total	With limitation in amount or kind of work Persons (1,000s)	With limitation in amount or kind of work Percent of total	With severe work limitation Persons (1,000s)	With severe work limitation Percent of total
Total	157,958	143,808	91.0	6,267	4.0	7,883	5.0
Gender							
Male	77,039	69,819	90.6	3,251	4.2	3,969	5.2
Female	80,919	73,989	91.4	3,017	3.7	3,913	4.8
Age							
16-24	31,741	30,594	96.4	561	1.8	586	1.9
25-34	42,793	40,343	94.3	1,266	2.9	1,184	2.8
35-44	36,931	34,034	92.2	1,457	3.9	1,440	3.9
45-54	25,263	22,304	88.3	1,289	5.1	1,670	6.6
55-64	21,231	16,533	77.9	1,695	7.9	3,003	14.0
Race and Hispanic origin							
White	133,542	122,290	91.6	5,406	4.4	5,846	4.8
Black	18,722	16,194	86.5	717	4.4	1,811	11.2
Hispanic[1]	13,132	12,026	91.6	358	3.0	748	6.2
Education							
Not H.S. grad.	34,114	28,625	83.9	1,577	4.6	3,912	11.5
High school grad.	60,651	55,279	91.1	2,622	4.3	2,749	4.5
Some college	31,553	29,574	93.7	1,167	3.7	812	2.6
College grad.	31,641	30,330	95.9	902	2.9	409	1.3

[1] Persons of Hispanic origin can be of any race.

Source: U. S. Bureau of the Census (1991). Poverty in the United States: 1988 and 1989. *Current Population Reports*, Series P-60, No. 171.

Labor force participation

Most people with severe work limitation are unable to work (Table 2). This group has a labor force participation rate of only 12.3%, with 9.6% currently employed and 2.7% laid off or looking for work. Most of those with severe work limitation who worked in the previous year had irregular and/or part-time jobs—about three-fourths of all those who worked in 1989.

In contrast, of people limited in the amount or kind of work they can do, 64.8% are in the labor force, with 57.6% employed and 7.2% laid off or looking for work. Of those who worked in the previous year, 60.8% worked irregularly and/or part-time.

Two of five people with severe work limitation are poor

Of people not limited in work, 79.9% are in the labor force with 75.7% employed and 4.2% unemployed. Of those who worked in the previous year, 36.7% worked irregularly and/or part-time.

Income poverty status and benefits

People severely limited in work report income from earnings and other sources for 1989 averaging $7,812, about half the income of people limited in amount or kind of

work and about 40% of the income of people not limited in work (with mean incomes of $16,484 and $19,851, respectively). About 42.3% of people severely limited in work are poor (defined as having incomes below 125% of the poverty line), twice the rate (21.7%) of people limited in amount or kind of work and almost four times the rate (12.1%) of people without work disability.

Almost half of women with severe work limitation are poor

Almost half of women (45.2%) with severe work limitation are poor (Figure 1). One in four women (25.8%) limited in the

TABLE 2. Work Disability, Work Status, and Income: United States, 1989 and 1990

	With no work limitation		With limitation in amount or kind of work		With severe work limitation	
	Persons (1,000s)	Percent of total	Persons (1,000s)	Percent of total	Persons (1,000s)	Percent of total
Total	143,808	100.0	6,267	100.0	7,883	100.0
Labor force status in 1990						
In labor force	114,847	79.9	4,058	64.8	968	12.3
Employed	108,791	75.7	3,609	57.6	755	9.6
Unemployed	6,056	4.2	449	7.2	213	2.7
Not in labor force	28,961	20.1	2,210	35.3	6,914	87.7
Work experience in 1989						
Worked during year	121,103	84.2	4,780	76.3	1,162	14.7
Year-round full-time	76,606	53.3	1,870	29.8	260	3.3
Irregularly/part-time	44,497	30.9	2,910	46.4	902	11.4
Did not work	22,705	15.8	1,488	23.7	6,720	85.3
Income of persons in 1989[1]						
Median	NA		$11,838		$5,911	
Mean	$19,851		$16,484		$7,812	
Ratio of income to poverty in 1989[1,2]						
Under 1.00	12,999	9.0	1,094	17.4	2,640	33.5
1.00 to 1.24	4,480	3.1	267	4.3	692	8.8
1.25 to 1.49	4,907	3.4	263	4.2	565	7.2
1.50 to 1.99	11,328	7.8	617	9.8	924	11.7
2.00 and above	111,035	76.7	4,041	64.3	3,061	38.8
Benefits in 1989[1]						
Social Security	3,905	2.7	647	10.3	3,346	42.5
Supplemental Security Income	-	-	-	-	2,266	28.7
Food stamps	7,772	5.4	736	11.7	1,949	24.7
Public housing	2,061	1.4	171	2.7	466	5.9
Subsidized housing	1,271	9	96	1.5	345	4.4

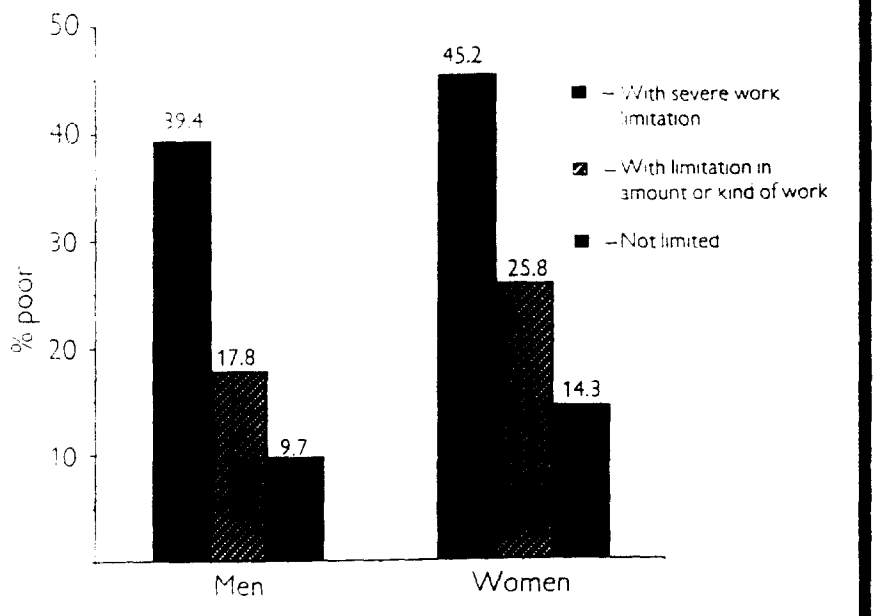
[1]Includes people in the military.
[2]Ratio of income of families or unrelated individuals to federal poverty line.

Source: U. S. Bureau of the Census (1991). *Poverty in the United States: 1988 and 1989. Current Population Reports*, Series P-60, No. 171; and unpublished data.

amount or kind of work they can perform is poor, compared to 14.3% of women without work disability who are poor. Although the proportion of men with work disability who are poor is not as high as for women, two in five men (39.4%) who are severely limited in work are poor, while one in six men (17.8%) who are limited in amount or kind of work is poor. In contrast, 9.7% of men not limited in work are poor.

Of people with severe work limitation, 42.5% receive Social Security retirement or disability cash benefits and 28.7% receive Supplemental Security Income benefits. People with work disability are more likely than those without work disability to receive food stamps or housing benefits.

FIGURE 1. Work Disability, Gender, and Poverty: United States, 1989

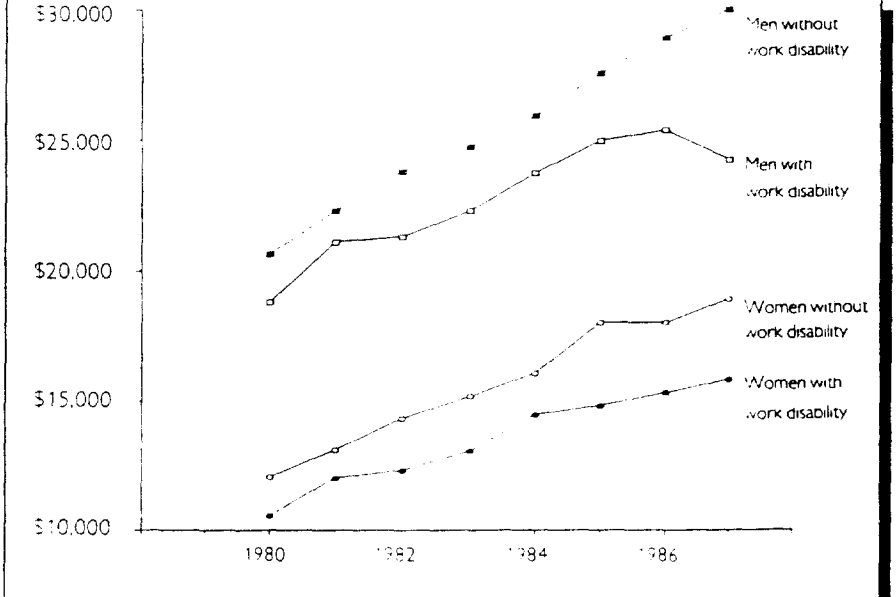


Poverty defined as under 125% of poverty level.
Source: U. S. Bureau of the Census, unpublished data; includes people in the military.

Trends in earnings

Earnings for people with work disability lag behind the earnings of the rest of the working-age population, according to CPS statistics for 1980 to 1987 (Figure 2). Earnings grew 45.3% for men without work disability but only 29% for men with work disability. Earnings grew by 57.2% for women without work disability but only 49.5% for women with work disability.

FIGURE 2. Work Disability, Gender, and Mean Earnings, 1980 to 1987



Mean earnings for civilians who worked year-round full-time.
Source: U. S. Bureau of the Census (1989). *Current Population Reports*, Series P-23, No. 160.

Credits

The Disability Statistics Abstract series is produced by the Disability Statistics Program, Institute for Health & Aging, School of Nursing, University of California, 201 Filbert Street, Suite 500, San Francisco, CA 94133-3203, with funding from NIDRR. Written by Mitchell P. LaPlante, Ph.D.; Shawn Miller, M.Ed.; & Karen Miller, M.Ed. Editorial assistance by Ida VSW Red, M.S.L.S.

This abstract is one of a series presenting statistical information on disability in the U.S. Statistics presented here are subject to both sampling and nonsampling error. Estimates with low statistical reliability (standard error > 30% of the estimate) are flagged with an asterisk. All comparisons mentioned in this abstract are statistically significant at the .10 level of significance or better unless noted otherwise. Comparisons and relationships discussed may be affected by other unanalyzed factors.

Americans With Disabilities: 1991-92

INTRODUCTION

This report presents data on the disability status of the noninstitutional population of the United States. The source of the data is a combined sample from the 1990 and 1991 panels of the Survey of Income and Program Participation (SIPP). A topical module (or supplement) containing an extensive set of questions about disability status was asked as part of the sixth wave of the 1990 panel and the third wave of the 1991 panel. Both of these waves were in the field during the last 3 months of 1991 and the first month of 1992. The total sample size for this study was approximately 30,000 interviewed households. Estimation procedures were used to inflate weighted sample results to independent estimates of the civilian noninstitutional population of the United States.

All demographic surveys, including SIPP, suffer from undercoverage of the population. This undercoverage results from missed housing units and missed persons within sample households. Compared to the level of the 1980 decennial census, overall undercoverage is about 7 percent. Undercoverage varies with age, sex, and race. For some groups, such as 20 to 24 year old Black males, the undercoverage is as high as 35 percent. The weighting procedures used by the Census Bureau partially correct for the bias due to undercoverage. However, its final impact on estimates is unknown. For details, see appendix B.

The term "disability" can be defined narrowly or broadly depending on the interest of the analyst. An example of a narrow definition is found in the Social Security Disability Insurance Program (SSDI). Under this program, persons are considered disabled if they are "unable to engage in substantial gainful activity." The disability determination process under the SSDI recognizes that medical conditions are not the only factors that affect work disability and takes into consideration other factors including age, education, and work history. A broader definition of disability is found in the Americans With Disabilities Act of 1990 (ADA). Under the ADA, an individual is considered to have a disability if the person: (a) has a physical or mental impairment that substantially limits one or more of the major life activities; (b) has a record of such an impairment; or (c) is regarded as having such as impairment.

The definitions above and the disability statistics that are presented in this report can be better understood by placing them in a conceptual framework. Perhaps the most important work in the area of a conceptual framework for disability is that of Saad Nagi. Nagi's framework consists of four interrelated concepts: active pathology, impairment, functional limitation, and disability. Nagi's framework was restated in the 1991 report *Disability in America,* edited by Andrew Pope and Alvin Tarlov.

1. Active pathology involves an interference with normal processes and the simultaneous efforts of the organism to regain a normal state.

2. Impairment involves a loss or abnormality of an anatomical, physiological, mental or emotional nature. Impairments include: (a) all conditions of pathology; (b) residual losses or abnormalities following an active state of pathology; and (c) abnormalities not associated with pathology (congenital formations).

3. Functional limitations refer to limitations which are manifested at the level of the organism as a whole (e.g., seeing, hearing, reaching, walking, performing basic mental tasks).

4. Disability refers to limitations in performing socially defined roles and tasks in such spheres as interpersonal relationships, family life, education, recreation, self-care, and work.

A second conceptual framework has been developed by Philip Wood for the World Health Organization as part of the International Classification of Impairments, Disabilities, and Handicaps (ICIDH). The ICIDH was developed as an extension of the International Classification of Diseases (ICD) and provides a detailed classification system for three concepts: impairments, disabilities, and handicaps. The ICIDH is not a finished system and a considerable amount of work is currently being devoted to improving certain aspects of the system especially the handicap concept and the classification of handicaps. Under the ICIDH, impairments are concerned with abnormalities of body structure, organ or system function, and appearance; disabilities reflect the consequences of the impairment in terms of functional performance; and handicaps are concerned with the disadvantages experienced by an individual as a result of impairments and disabilities and the interaction of the individual with his or her surroundings.

A recent report examined the applications of the ICIDH to household disability surveys and proposed a recommended minimum set of questions for such surveys. The recommended set is actually very close to the questions that are described as functional limitation questions in this study [McNeil, 1991a].

The SIPP questions that were used to determine disability status for this study can be grouped into 12 categories (questions in categories 1-11 are reproduced in appendix C):

1. Questions for persons 15 years old and over about the use of special aids: canes, crutches, walkers, and wheelchairs.

2. Questions for persons 15 years old and over about difficulty with sensory and physical functional activities: seeing, hearing, having one's speech understood, lifting and carrying, walking up a flight of stairs, and walking a quarter of a mile. When a person was identified as having difficulty with a particular functional activity, a follow-up question asked if the person could perform the activity at all.

3. Questions for persons 15 years old and over about difficulty with Activities of Daily Living (ADL's): getting around inside the home, getting in or out of a bed or chair, taking a bath or shower, dressing, eating, and using the toilet. When a person was identified as having difficulty with a particular ADL, a follow-up question asked if the person needed the help of another person with that activity.

4. Questions for persons 15 years old and over about difficulty with Instrumental Activities of Daily Living (IADL's): going outside the home, keeping track of money or bills, preparing meals, doing light housework, and using the telephone. For the first four IADL's, a follow-up question about the need for personal assistance was asked when a person was identified as having difficulty with that activity. When a person was identified as having difficulty using the telephone, a follow-up question asked if the person was able to use the telephone at all.

5. Questions for persons 15 years old and over about the existence of specific conditions including: (a) dyslexia; (b) mental retardation; (c) developmental disabilities such as autism or cerebral palsy; (d) Alzheimer's disease, senility, or dementia; and (e) any other mental or emotional condition.

6. A question for persons 16 to 67 years old about the presence of a physical, mental, or other health condition that limits the kind or amount of work the person can do. When a person was identified as having a work disability, a follow-up question asked if the person was prevented from working at a job or business.

7. A question for persons 16 years old and over about the presence of a physical, mental, or other health condition that limits the kind or amount of housework the person can do. When a person was identified as having a housework disability, a follow-up question asked if the person was prevented from doing work around the house.

8. A question asked of parents of children under 6 years about whether the children had any limitations at all in the usual kind of activities done by most children their age.

9. A question asked of parents of children under 6 years about whether the children had received therapy or diagnostic services designed to meet their developmental needs.

10. A question asked of parents of children 6 to 21 years old about whether the children had limitations in their ability to do regular school work.

11. A question asked of parents of children 3 to 14 years old about whether the children had a long lasting condition that limited their ability to walk, run, or use stairs.

12. Questions which identified persons who were receiving Supplemental Security Income or Medicare benefits on the basis of their disability status.

In terms of Nagi's conceptual framework, categories 1, 2, and 11 are measures of functional limitations; categories 3, 4, and 7 are measures of self-care or family life disabilities; categories 6 and 12 are measures of work disability; category 10 is a measure of education disability; categories 8 and 9 are measures of disability for young children; and category 5 is a measure of the presence of specific impairments.

When a person was identified as having a physical functional limitation or an ADL or IADL limitation, a follow-up question asked the respondent to examine a printed list of conditions and select the condition or set of conditions that caused the limitation. The condition question was also asked for persons identified as having a work or housework disability. A similar follow-up question, with a different conditions list, was asked of parents of children identified as having a limitation or disability.

For the purpose of this study, a person was considered to have a disability if the person was identified by any of the questions described in the 12 categories above (except that persons who used a cane, crutches, or a walker, but who had used such an aid for less than 6 months and who were not identified by any other item were not considered to have a disability). The category of persons with a severe disability includes the following:

1. Persons 15 years old and over who used a wheelchair or who had used a cane, crutches, or a walker for 6 months or longer.

2. Persons 15 years old and over who were unable to perform one or more functional activities or who needed the help of another person with an ADL or an IADL.
3. Persons 16 to 67 years old who were prevented from working at a job or business.
4. Persons 16 years old and over who were prevented from doing work around the house.
5. Persons 15 years old and over with mental retardation, a developmental disability such as autism or cerebral palsy, or Alzheimer's disease, senility, or dementia (either measured directly or cited as a condition causing a limitation or disability).
6. Persons 0 to 21 years old with autism, cerebral palsy, or mental retardation (cited as a condition causing a limitation or disability).

THE ROLE OF THE ENVIRONMENT IN DETERMINING DISABILITY STATUS

When the Chairman of Disabled People International was asked to comment on the conceptual framework underlying the ICIDH, he provided the following statement [Enns, 1989]:

"Whereas disability has too long been viewed as a problem of the individual and not the relationship between an individual and his/her environment, it is necessary to distinguish between:

a. *disability* as the functional limitation within the individual caused by physical, mental, or sensory impairments; and

b. *handicap* as the loss or limitation of opportunities to take part in the normal life of the community on an equal level with others due to physical and social barriers."

An understanding of the role of the environment (the extent to which physical and social barriers exist) is critical to any attempt to define disability or handicap [McNeil, 1991b].

Using Nagi's framework, impairments that lead to functional limitations or disabilities under one set of environmental conditions need not lead to functional limitations or disabilities under another set. An almost universal example of an enabling environmental factor that reduces the effect of impairments is corrective lenses. Other examples of enabling environmental factors include wheelchairs, electric scooters, elevators, lifts, ramps, and telecommunication relay services.

The SIPP disability questions do not explicitly address the issues of physical and social barriers. There are no specific questions about barriers within the home, community, school, or workplace; there are no specific questions about the accessibility of transportation systems or other services within the community; and there are no specific questions about experiences with discrimination.

There is a need to develop household survey questions that explicitly address the issues of physical and social barriers. There is a hope that this process will be moved forward by the work currently being done by the Quebec Committee on the ICIDH on improving the "handicap" portion of the ICIDH [Fougeyrollas].

The fact that survey questions do not explicitly address the issues of physical and social barriers does not mean that survey results cannot be used to measure changes in those barriers. If, over a period of years, we learn that the relative employment rate and earnings of persons who use wheelchairs has risen, then we can infer that there has been some reduction in barriers. An important element that will be missing is a measure of where in the process the barrier reduction(s) occurred.

HIGHLIGHTS

(The figures in parentheses denote 90-percent confidence intervals.)

- Based on interviews conducted during the October 1991-January 1992 period, the number of persons with a disability (primarily defined as a limitation in a functional activity or in a socially defined role or task) was 48.9 (±0.7) million, or 19.4 (±0.3) percent of the total population of 251.8 million. This figure excludes persons living in nursing homes or other institutions. The definition of disability used in this study is broader than that used in other Bureau of the Census reports that show data on disability status. The 1990 census, for example, contained only questions on work disability, mobility limitations, and self-care limitations, and disability estimates from the March Current Population Survey refer only to persons with a work disability.[1]

[1]According to the 1990 census, there were 12.8 million civilian noninstitutional persons 16 to 64 years of age with a work disability; 6.6 million of these persons were prevented from working by their disability. The 1990 census also showed that 13.2 million civilian noninstitutional persons 16 years old and over had a mobility or self-care limitation. Data from the March 1992 Current Population Survey, published in Poverty in the United States: 1991, Series P-60, No. 181, show 14.9 million persons 16 to 64 years with a work disability, 8.4 million of whom were classified as having a severe work disability. Disability data from the 1984 panel of the Survey of Income and Program Participation were published in Disability, Functional Limitation, and Health Insurance Coverage: 1984/85, Series P-70, No. 8. A set of questions in that survey asked about any difficulty performing nine activities (seeing, hearing, speaking, lifting and carrying, walking, using stairs, getting around outside, getting around inside, and getting into and out of bed). The number of persons 15 years old and over who had difficulty with one or more of these activities was 37.3 million.

- The number of persons with a severe disability (primarily defined as an inability to perform one or more functional activities or one or more socially defined roles or tasks) was 24.1 (±0.5) million, or 9.6 (±0.2) percent of the population.
- The survey collected information on six categories of functional activities including seeing, hearing, speaking, lifting and carrying, climbing stairs, and walking. Among persons 15 years old and over, 34.2 (±0.6) million had difficulty performing one or more functional activities. Of this number, 15.2 (±0.4) million were unable to perform one or more of these activities.
- Among persons 15 years old and over, 9.7 (±0.4) million had difficulty seeing the words and letters in ordinary newsprint even when wearing corrective lenses. Of this total, 1.6 (±0.1) million could not see such words and letters at all.
- The number of persons 15 years old and over who had difficulty hearing what was said in a normal conversation with another person was 10.9 (±0.4) million, and 0.9 (±0.1) million of these persons were completely unable to hear what was said in such a conversation.
- The survey collected information on six categories of Activities of Daily Living (ADL's): getting around inside the home, getting in or out of a bed or chair, taking a bath or shower, dressing, eating, and toileting. The number of persons 15 years old and over reporting some difficulty with one or more ADL's was 7.9 (±0.3) million. Of this total, the number who needed personal assistance with one or more ADL's was 3.9 (±0.2) million.
- Of the 3.9 (±0.2) million needing assistance with an ADL, 1.5 (±0.1) million needed assistance with one ADL, 0.8 (±0.1) million needed assistance with two ADL's, and 1.6 (±0.1) million needed assistance with three or more ADL's. (The number needing assistance with one ADL was not statistically different from the number needing assistance with three or more ADL's).
- The survey collected information on five categories of Instrumental Activities of Daily Living (IADL's) including going outside the home, keeping track of money and bills, preparing meals, doing light housework, and using the telephone. The number of persons reporting some difficulty with one or more IADL's was 11.7 (±0.4) million. Of this total, the number needing personal assistance was 8.7 (±0.3) million.
- Of the 8.7 (±0.3) million needing assistance with an IADL, 3.7 (±0.2) million needed assistance with one IADL, 2.0 (±0.2) million needed assistance with two IADL's, and 3.1 (±0.2) million needed assistance with three or more IADL's.
- The number of persons 15 years old and over who needed personal assistance with one or more ADL's or IADL's was 9.2 (±0.3) million.
- The number of persons 15 years old and over who used a wheelchair was 1.5 (±0.1) million. Another 4.0 (±0.2) million persons did not use a wheelchair but used a cane, crutches, or a walker and had used such an aid for 6 months or longer.
- Of the 48.9 (±0.7) million persons with a disability, 6.0 (±0.4) percent were less than 15 years old, 60.2 (±0.8) percent were 15 to 64 years old, and 33.8 (±0.8) percent were 65 years old and over. Among the 24.1 (±0.5) million with a severe disability, 2.2 (±0.3) percent were under 15, 54.6 (±1.2) percent were 15 to 64, and 43.2 (±1.2) percent were 65 and over.
- Among the 13.2 (±0.4) million persons 15 to 64 years old with a severe disability, 48.1 (±1.6) percent were covered by private health insurance, 36.2 (±2.0) percent were covered by a government plan only (Medicaid or Medicare), and 15.7 (±1.1) percent lacked coverage. Among the 16.3 (±0.5) million persons 15 to 64 years old with a disability that was not severe, 74.1 (±1.2) percent were covered by private health insurance, 7.2 (±1.0) percent were covered by a government plan only, and 18.7 (±1.1) percent were not covered. For the 135.6 (±0.9) million persons in the same age group with no disability, the comparable coverage figures were 80.0 (±0.6) percent, 5.2 (±0.3) percent and 14.8 (±0.5) percent. There was no statistically significant difference in the percentage of persons lacking coverage between those with a severe disability and those with no disability.
- Among persons 21 to 64 years old, the employment rate was 80.5 (±0.3) percent for persons with no disability, 76.0 (±1.3) percent for persons with a disability that was not severe, and 23.2 (±1.4) for persons with a severe disability.
- Among selected groups within the 21 to 64 years age group, the employment rate was 48.6 (±1.4) percent among persons with a functional limitation, 27.6 (±2.1) percent among persons with a severe functional limitation, and 20.6 (±2.4) percent among persons who needed personal assistance with one or more ADL's or IADL's.
- Among persons 15 years old and over with a physical, ADL, or IADL limitation, the conditions most frequently cited as a cause of a limitation were arthritis or rheumatism (17.1 (±0.7) percent of all conditions cited), back or spine problems (13.5 (±0.6) percent), heart trouble (11.1 (±0.6) percent), and lung or respiratory trouble (6.8 (±0.5) percent).

- Among children 0 to 5 years, the proportion with any disability was 3.6 (±0.4) percent and the proportion with a severe disability was 0.5 (±0.2) percent. The comparable figures for children 6 to 14 years of age were 6.3 (±0.5) percent and 1.3 (±0.2) percent.

PREVALENCE OF DISABILITY BY TYPE

The disability questions that were included in the SIPP topical module on disability covered many important dimensions of disability. Questions about six functional activities, six activities of daily living (ADL's), five instrumental activities of daily living (IADL's), the use of wheelchairs and other aids, and the presence of five classes of impairments (learning disabilities, mental retardation, other developmental disabilities, Alzheimer's/senility/dementia, and other mental or emotional conditions) were asked for all persons 15 years of age or older. Questions about work disability were asked for all persons 16 to 67 years old, and questions about housework disability were asked for persons 16 years old or older. In addition, questions about the disability status of children were asked of parents of children 0 to 21 years of age.

The 48.9 million persons counted as having a disability (see table A) were identified by one or more of the items described above or by the fact that they were a nonaged beneficiary of either Medicare or the SSI program.

The 24.1 million persons counted as having a severe disability were identified as unable to perform one or more activities, or as having one or more specific impairments, or as a person who used a wheelchair or who was a long term user of crutches, a cane, or a walker.

Of the 195.7 million persons 15 years old and over, 34.2 million (17.5 percent) had difficulty with one or more functional activities (see table B) and 15.2 million (7.8 percent) were unable to perform one or more activities (The group of persons with some difficulty includes the group who were unable to perform the activity).

Relatively large numbers of persons were identified as having difficulty with physical activities. In all, 16.2 million persons (8.3 percent) had difficulty lifting and carrying a weight as heavy as 10 pounds, and 7.7 million (4.0 percent) could not perform this task at all; 17.3 million (8.9 percent) persons had difficulty walking a quarter of a mile or 3 city blocks, and 9.0 million (4.6 percent) could not walk this distance at all.

The number having difficulty seeing the words and letters in ordinary newsprint was 9.7 million (5.0 percent) and the number who were completely unable to see words and letters was 1.6 million (0.8 percent). The number who had difficulty hearing what was said in an ordinary conversation with another person was 10.9 million (5.6 percent) and 0.9 million (0.5 percent) persons could not hear such a conversation at all. The least prevalent of the six functional limitations was difficulty having one's speech understood. The number identified as having difficulty with this functional activity was 2.3 million (1.2 percent); the number unable to have their speech understood at all was 0.2 million (0.1 percent).

Table A. **Disability Status, by Sex and Age: 1991-92**

[Numbers in thousands]

Sex and age	Total	With a disability					
		Total		Not severe		Severe	
		Number	Percent	Number	Percent	Number	Percent
BOTH SEXES							
Total	251,796	48,936	19.4	24,819	9.9	24,117	9.6
Less than 15 years	56,067	2,913	5.2	2,384	4.3	529	0.9
15 to 64 years	165,040	29,482	17.9	16,311	9.9	13,171	8.0
65 years and over	30,688	16,541	53.9	6,124	20.0	10,417	34.0
MALES							
Total	122,692	22,916	18.7	12,987	10.6	9,929	8.1
Less than 15 years	28,707	1,876	6.5	1,540	5.4	336	1.2
15 to 64 years	81,154	14,504	17.9	8,642	10.6	5,862	7.2
65 years and over	12,831	6,536	50.9	2,805	21.9	3,731	29.1
FEMALES							
Total	129,104	26,020	20.2	11,833	9.2	14,187	11.0
Less than 15 years	27,360	1,038	3.8	846	3.1	192	0.7
15 to 64 years	83,886	14,978	17.9	7,669	9.1	7,309	8.7
65 years and over	17,857	10,005	56.0	3,319	18.6	6,686	37.4

Table B. **Persons 15 Years Old and Over Having Difficulty With or Unable to Perform Specified Functional Activities: 1991-92**

[Numbers in thousands]

Functional activities	Persons 15 years old and over		Persons 15 to 64 years old		Persons 65 years old and over	
	Number	Percent distribution	Number	Percent distribution	Number	Percent distribution
TOTAL	195,729	100.0	165,040	100.0	30,688	100.0
Has difficulty with or is unable to perform specified number of functional activities:						
One or more	34,163	17.5	18,948	11.5	15,215	49.6
One	14,463	7.4	9,826	6.0	4,637	15.1
Two	7,093	3.6	3,980	2.4	3,113	10.1
Three or more	12,608	6.4	5,143	3.1	7,464	24.3
Has difficulty with or is unable to perform specified functional activity:						
Seeing words and letters	9,685	5.0	4,801	2.9	4,884	15.9
Hearing normal conversations	10,928	5.6	5,522	3.4	5,406	14.5
Having speech understood	2,284	1.2	1,517	0.9	767	2.5
Lifting and carrying 10 lbs.	16,205	8.3	7,827	4.7	8,378	27.3
Climbing stairs without resting	17,469	8.9	8,068	4.9	9,400	30.6
Walking 3 city blocks	17,319	8.9	7,937	4.8	9,381	30.6
Unable to perform specified number of functional activities:						
One or more	15,173	7.8	6,552	4.0	8,620	28.1
One	6,979	3.6	3,642	2.2	3,337	10.9
Two	3,956	2.0	1,593	1.0	2,363	7.7
Three or more	4,286	2.2	1,361	0.8	2,925	9.5
Unable to perform specified functional activity:						
Seeing words and letters	1,590	0.8	579	0.4	1,011	3.3
Hearing normal conversation	924	0.5	364	0.2	561	1.8
Having speech understood	237	0.1	161	0.1	76	0.3
Lifting and carrying 10 lbs.	7,734	4.0	3,121	1.9	4,613	15.0
Climbing stairs without resting	9,116	4.7	3,595	2.2	5,522	18.0
Walking 3 city blocks	8,972	4.6	3,243	2.0	5,729	18.7

Of the 34.2 million persons having difficulty with one or more functional activities, more than half had difficulty with more than one activity; 14.5 million had difficulty with one; 7.1 million had difficulty with two; and 12.6 million had difficulty with three or more.

Among the 15.2 million persons who were unable to perform one or more functional activities, 7.0 million were unable to perform one activity, 4.0 million were unable to perform two activities, and 4.3 million were unable to perform three or more activities (the latter two figures are not statistically different).

Persons were much less likely to have difficulty with an ADL than to have difficulty performing a functional activity (see table C). The number of persons 15 years old and over who had difficulty with one or more ADL's was 7.9 million (4.1 percent). Of this number, 3.9 million (2.0 percent of the population 15 years old and over) required the assistance of another person with one or more of the basic six activities.

Data for individual ADL's show that 5.3 million persons had difficulty getting in or out of bed or a chair, 4.5 million had difficulty with the activity of bathing, 3.7 million persons had difficulty getting around inside the home, 3.2 million had difficulty with the activity of dressing, 2.1 million had difficulty using the toilet (including getting to the toilet), and 1.1 million had difficulty with the activity of eating.

The number needing assistance with the specific ADL's was 2.7 million for bathing, 2.1 million for dressing, 2.0 million for getting in or out of bed or a chair (a figure not statistically different from the preceding figure), 1.7 million for getting around inside the home, 1.2 million for using the toilet, and 0.5 million for eating.

It is likely that a person having difficulty with an ADL will have difficulties in two or more activities. Of the 7.9 million persons with an ADL limitation, 3.3 million had difficulty with one activity, and 4.6 million had difficulty with two or more. Of those needing assistance, 1.5 million needed assistance with one activity, and 2.4 million needed assistance with two or more.

Persons are more likely to experience difficulties with IADL's than with ADL's (see table D). The number having difficulty with one or more of the five IADL's was 11.7 million or 6.0 percent of the 15 and over population. The number needing assistance with one or more of the activities was 8.7 million (4.5 percent).

Table C. **Persons 15 Years Old and Over Having Difficulty With or Needing Personal Assistance With Activities of Daily Living (ADL's): 1991-92**

[Numbers in thousands]

Activities of daily living	Persons 15 years old and over		Persons 15 to 64 years old		Persons 65 years old and over	
	Number	Percent distribution	Number	Percent distribution	Number	Percent distribution
TOTAL	195,729	100.0	165,040	100.0	30,688	100.0
Has difficulty with or needs personal assistance with specified number of ADL's:						
One or more	7,919	4.1	3,442	2.1	4,478	14.6
One	3,337	1.7	1,587	1.0	1,750	5.7
Two	1,394	0.7	688	0.4	706	2.3
Three or more	3,189	1.6	1,166	0.7	2,022	6.6
Has difficulty with or needs personal assistance with specified ADL:						
Getting around inside the home	3,664	1.9	1,307	0.8	2,357	7.7
Getting in or out of bed or a chair	5,280	2.7	2,374	1.4	2,905	9.5
Taking a bath or shower	4,501	2.3	1,592	1.0	2,909	9.5
Dressing	3,234	1.7	1,327	0.8	1,907	6.2
Eating	1,077	0.6	431	0.3	646	2.1
Toileting	2,084	1.1	726	0.4	1,358	4.4
Needs personal assistance with specified number of ADL's:						
One or more	3,886	2.0	1,514	0.9	2,372	7.7
One	1,490	0.8	586	0.4	905	3.0
Two	778	0.4	370	0.2	408	1.3
Three or more	1,618	0.8	559	0.3	1,059	3.5
Needs personal assistance with specified ADL:						
Getting around inside the home	1,706	0.9	575	0.4	1,130	3.7
Getting in or out of bed or a chair	2,022	1.0	871	0.5	1,151	3.8
Taking a bath or shower	2,718	1.4	900	0.6	1,818	5.9
Dressing	2,060	1.1	782	0.5	1,278	4.2
Eating	487	0.3	150	0.1	337	1.1
Toileting	1,157	0.6	389	0.2	768	2.5

The number of persons having difficulty with individual IADL's was 7.8 million for going outside the home to shop or visit a doctor's office, 6.3 million for doing light housework such as washing dishes or sweeping a floor, 4.5 million for preparing meals, 3.9 million for keeping track of money and bills, and 3.1 million for using the telephone.

Among those needing assistance with an IADL were 6.0 million for going outside the home to shop or visit a doctor's office, 4.7 million for doing light housework, 3.7 million for preparing meals, and 3.4 million for keeping track of money and bills (not statistically different from the preceding figure). The number of persons who were unable to use a telephone was 0.9 million.

Multiple IADL difficulties were more prevalent than single IADL difficulties. Of the 11.7 million persons with some difficulty, 5.0 million had difficulty with one IADL, 2.5 million had difficulty with two, and 4.2 million had difficulty with three or more. Of those needing assistance with one or more IADL's, 3.7 million needed help with one, 2.0 million needed help with two, and 3.1 million needed help with three or more.

Based on responses to the ADL and IADL questions, the number of persons needing assistance with one or more activities was 9.2 million, or 4.7 percent of the population 15 years old and over. (The latter figure is not statistically different from the 4.5 percent needing assistance with an IADL.)

The number of persons 15 years old and over who used a wheelchair was 1.5 million; another 4.0 million did not use a wheelchair but had used a cane, crutches, or a walker for 6 months or longer.

There were several items on the questionnaire that attempted to identify persons with a mental or emotional disability. In this study, a person 15 years old and over was considered to have a mental or emotional disability if the person: (a) was identified by one of the questions that asked if the person had a learning disability, had mental retardation, had Alzheimer's disease, senility, or dementia, or had any other mental or emotional condition; (b) had a functional, ADL, or IADL limitation or a work or housework disability that was caused by any of four conditions including learning disability, mental or emotional problems or disorders, mental retardation, or senility, dementia, or Alzheimer's disease; or (c) had difficulty keeping track of money and bills.

Table D. **Persons 15 Years Old and Over Having Difficulty With or Needing Personal Assistance With Instrumental Activities of Daily Living (IADL's): 1991-92**

[Numbers in thousands]

Instrumental activities of daily living	Persons 15 years old and over		Persons 15 to 64 years old		Persons 65 years old and over	
	Number	Percent distribution	Number	Percent distribution	Number	Percent distribution
TOTAL	195,729	100.0	165,040	100.0	30,688	100.0
Has difficulty with or needs personal assistance with specified number of IADL's:						
One or more	11,694	6.0	5,080	3.1	6,614	21.6
One	5,021	2.6	2,533	1.5	2,488	8.1
Two	2,482	1.3	1,158	0.7	1,324	4.3
Three or more	4,190	2.1	1,388	0.8	2,802	9.1
Has difficulty with or needs personal assistance with specified IADL's:						
Getting around outside the home	7,809	4.0	2,885	1.8	4,924	16.0
Keeping track of money and bills	3,901	2.0	1,597	1.0	2,303	7.5
Preparing meals	4,530	2.3	1,680	1.0	2,850	9.3
Doing light housework	6,313	3.2	2,565	1.6	3,747	12.2
Using the telephone	3,130	1.6	1,140	0.7	1,990	6.5
Needs personal assistance with specified number of IADL's:						
One or more	8,705	4.5	3,585	2.2	5,120	16.7
One	3,668	1.9	1,785	1.1	1,883	6.1
Two	1,980	1.0	842	0.5	1,139	3.7
Three or more	3,057	1.6	958	0.6	2,099	6.8
Needs personal assistance with specified IADL's:						
Getting around outside the home	6,011	3.1	1,993	1.2	4,018	13.1
Keeping track of money and bills	3,425	1.8	1,384	0.8	2,041	6.7
Preparing meals	3,685	1.9	1,321	0.8	2,364	7.7
Doing light housework	4,745	2.4	1,763	1.1	2,982	9.7
Using the telephone	933	0.5	373	0.2	560	1.8

The number of persons 15 years old and over identified as having a mental or emotional disability was 6.9 million, or 3.5 percent of all persons in this age group (see table E).

Work disability questions were asked of persons 16 to 67 years old and housework disability questions were asked of persons 16 years old and over. The number of persons with a work disability was 19.5 million or 11.6 percent of the 16 to 67 year old population (see table E). Of the 19.5 million, 8.6 million (5.1 percent) had a condition that prevented them from working at a job or business. The number of persons with a housework disability was 18.1 million (9.4 percent of persons 16 years old and over.) The number unable to do housework was 3.6 million (1.9 percent).

AGE, SEX, AND DISABILITY

The likelihood of having a disability increases with age (see figure 1 and table 7). The survey data show a prevalence rate of 5.8 percent among persons less than 18 years old, 13.6 percent among persons 18 to 44 years old, 29.2 percent among persons 45 to 64 years old, 44.6 percent among persons 65 to 74 years old, 63.7 percent among persons 75 to 84 years old, and 84.2 percent among persons 85 years old and over.

Among persons with a disability, the likelihood that the disability will be severe also increases with age. The likelihood is 21.8 percent among persons less than 18 years old, 38.2 percent among persons 18 to 44, 52.2 percent among persons 45 to 64, 56.8 percent among person 65 to 74, 65.1 percent among persons 75 to 84, and 81.2 percent among persons 85 and over.

In general, disability rates are somewhat lower among males than among females. Males had a disability rate of 18.7 percent and a severe disability rate of 8.1 percent. The comparable rates among females were 20.2 percent and 11.0 percent.

Part of the explanation of differences between males and females has to do with age structure and the fact that disability rates increase with age. The proportion of the population who were 65 years old and over was 10.5 percent among males and 13.8 percent among females. Even within age categories, however, there were some differences in prevalence. In the 75 to 84 years old group, for example, the disability rate among males was 60.8 percent and the severe disability rate was 35.3 percent. The comparable rates among females were 65.6 percent and 45.5 percent.

Table E. **Persons, by Age and Selected Measures of Disability Status: 1991-92**

[Numbers in thousands]

Age and disability measure	Both Sexes		Males		Females	
	Number	Percent distribution	Number	Percent distribution	Nunber	Percent
PERSONS 15 YEARS OLD AND OVER						
Total	195,729	100.0	93,985	100.0	101,744	100.0
Needs personal assistance with an ADL or IADL	9,211	4.7	3,383	3.6	5,828	5.7
Uses a wheelchair	1,494	0.8	575	0.6	919	0.9
Does not use a wheelchair but has used a cane, crutches, or a walker for six months or longer	3,962	2.0	1,547	1.7	2,415	2.4
With a mental or emotional disability	6,879	3.5	3,534	3.8	3,345	3.3
PERSONS 15 TO 64 YEARS OLD						
Total	165,040	100.0	81,154	100.0	83,886	100.0
Needs personal assistance with an ADL or IADL	3,876	2.4	1,665	2.1	2,211	2.6
Uses a wheelchair	529	0.3	263	0.3	266	0.3
Does not use a wheelchair but has used a cane, crutches, or a walker for six months or longer	1,115	0.7	567	0.7	548	0.7
With a mental or emotional disability	5,746	3.5	3,162	3.9	2,584	3.1
PERSONS 65 YEARS OLD AND OVER						
Total	30,688	100.0	12,831	100.0	17,857	100.0
Needs personal assistance with an ADL or IADL	5,336	17.4	1,718	13.4	3,617	20.3
Uses a wheelchair	965	3.1	311	2.4	653	3.7
Does not use a wheelchair but has used a cane, crutches, or a walker for six months or longer	2,847	9.3	980	7.6	1,867	10.5
With a mental or emotional disability	1,133	3.7	372	2.9	760	4.3
PERSONS 16 TO 67 YEARS OLD						
Total	167,899	100.0	82,261	100.0	85,638	100.0
With a work disability	19,544	11.6	9,620	11.7	9,924	11.6
Prevented from working	8,632	5.1	3,922	4.8	4,710	5.5
PERSONS 16 YEARS OLD AND OVER						
Total	192,348	100.0	92,220	100.0	100,128	100.0
With a housework disability	18,088	9.4	7,477	8.1	10,611	10.6
Unable to do housework	3,591	1.9	1,691	1.8	1,900	1.9

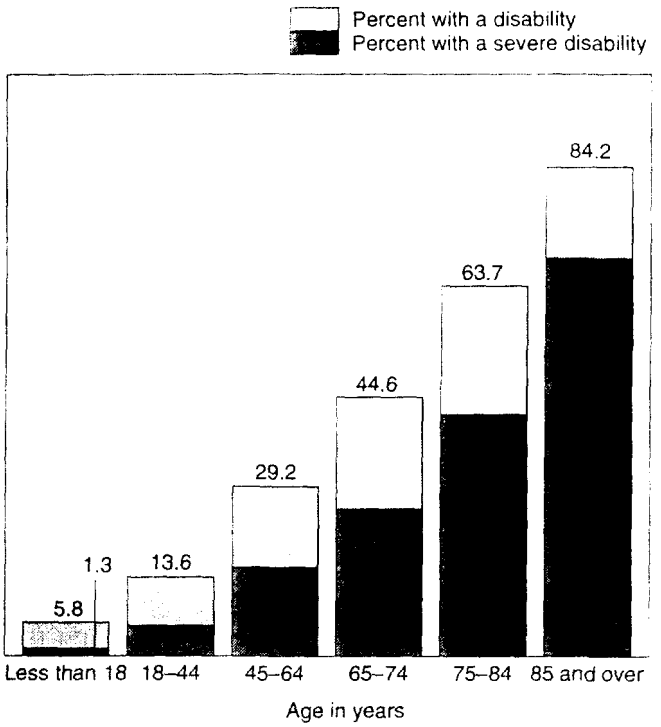
Among children less than 18 years old, males were more likely than females to have a disability (7.2 percent compared to 4.4 percent).

Of the 48.9 million persons with a disability, 16.4 million (33.5 percent) were males under 65 years old, 16.0 million (32.7 percent) were females under 65 years old (the latter two figures are not statistically different from the comparable figures for males under 65), 6.5 million (13.4 percent) were males 65 years old and over, and 10.0 million (20.4 percent) were females 65 years old and over (see figure 2).

Of the 24.1 million persons with a severe disability, 6.2 million (25.7 percent) were males under 65, 7.5 million (31.1 percent) were females under 65, 3.7 million (15.5 percent) were males 65 and over, and 6.7 million (27.7 percent) were females 65 and over (see figure 3).

The data cited above show a strong relationship between age and the likelihood of a disability: persons 65 years and over made up 12.2 percent of the total population but they accounted for 33.8 percent of all persons with a disability, and 43.2 percent of all persons with a severe disability.

Figure 1.
Percent of Persons With a Disability and With a Severe Disability, by Age: 1991-92



Certain definitional issues arise when trying to determine the link between age and disability. Of primary importance is the decision concerning the age at which working at a job or business is no longer counted as an expected life activity. The SIPP work disability questions were not asked of persons 68 years old and over. Yet some persons are interested in working at age 68 and beyond. The decision to restrict the universe for the work disability question to persons 16 to 67 affects the interpretation of the link between age and disability.

The relationship between age and disability strengthens (in terms of the proportion of persons with specific disabilities who are 65 years old and over) when the areas of functional limitations, the need for assistance, and the use of special aids are examined. Questions on these topics were asked for persons 15 years old and over.

Persons 65 years old and over made up 56.8 percent of those with a severe functional limitation, 57.9 percent of those needing assistance with an ADL or IADL (the latter two figures are not statistically different), 64.6 percent of persons who use wheelchairs, and 71.9 percent of those who used a cane, crutches, or a walker and who had used such an aid for 6 months or longer.

RACE, HISPANIC ORIGIN, AND DISABILITY

Data for persons of all ages show that the overall disability rates among Whites (19.7 percent), Blacks (20.0 percent), and American Indians, Eskimos, and Aleuts (21.9 percent) were not statistically different, but the rate of 15.3 percent among persons of Hispanic origin (who may be of any race) was lower than the rates for the first three groups mentioned, and the rate among Asians and Pacific Islanders (9.9 percent) was lower than the rate for persons of Hispanic origin (see table 11).

There were differences among races and ethnicity groups in the severe disability prevalence rate. The rate was 9.4 percent among Whites; 12.2 percent among Blacks; and 8.4 percent among persons of Hispanic origin. Asians and Pacific Islanders had the lowest

Figure 2.
Sex and Age Composition of Persons With a Disability: 1991-92

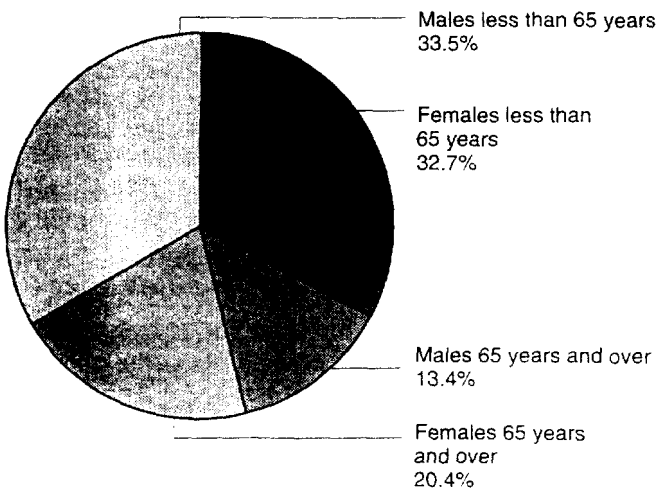
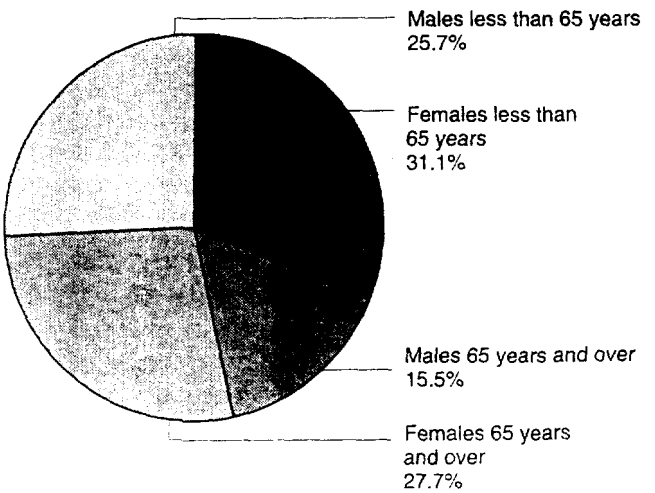


Figure 3.
Sex and Age Composition of Persons With a Severe Disability: 1991-92

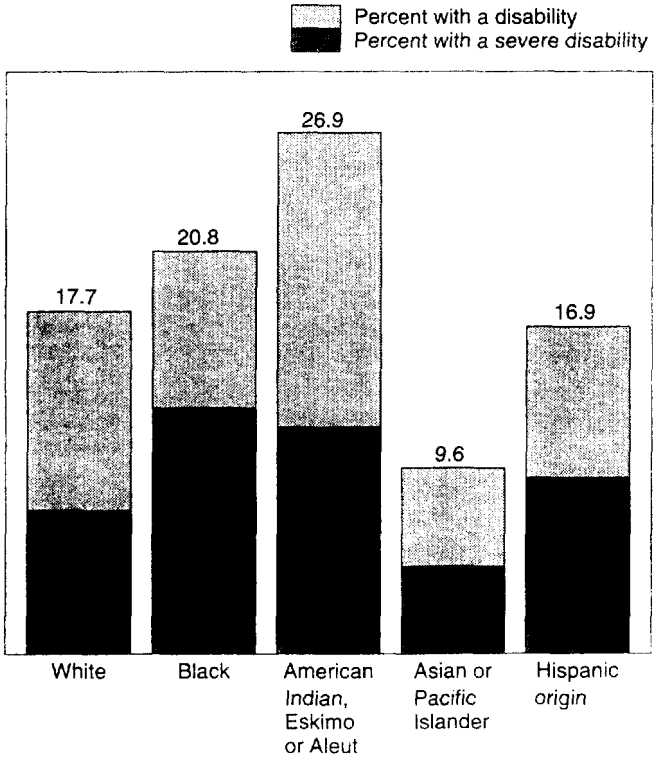


prevalence rate, 4.9 percent. The rate was 9.8 percent among American Indians, Eskimos, and Aleuts, higher than the rate for Asians and Pacific Islanders, but not statistically different from the rates for other groups.

Comparisons among race and ethnic groups need to consider the effect of other variables, particularly differing age structures. The proportion of the population aged 65 years and over was 13.0 percent among Whites and 8.7 percent among Blacks. The rates of 4.7 percent among American Indians, Eskimos, and Aleuts, 5.6 percent among persons of Hispanic origin, and 6.1 percent among Asians and Pacific Islanders were lower than for Whites or Blacks but were not statistically different from each other. These differences in age structure reflect differences in life expectancies, birth rates, and immigration patterns.

When disability rates are examined for the population 15 to 64 years of age (see figure 4 and table 12), the rate among Whites (17.7 percent) is found to be lower than the rate among Blacks (20.8 percent) and not statistically different from the rate among persons of Hispanic origin (16.9 percent). American Indians, Eskimos, and Aleuts had the highest rate (26.9 percent), and Asians and Pacific Islanders had the lowest (9.6 percent). When severe disability is used as the measure, Blacks (12.7 percent), American Indians, Eskimos and Aleuts (11.7 percent), and persons of Hispanic origin (9.1 percent) had higher rates than Whites (7.4 percent), and Asians and Pacific Islanders again had the lowest rate (4.5 percent). The rate for American Indians, Eskimos, and Aleuts was not statistically different from the rate for Blacks or persons of Hispanic origin.

Figure 4.
Percent of Persons 15 to 64 Years Old With a Disability and With a Severe Disability, by Race and Hispanic Origin: 1991-92



EDUCATION AND DISABILITY

There is a very strong association between years of school completed and the likelihood of having a disability. For example, among persons 25 to 64 years old, the proportion with a severe disability was 22.8 percent among persons who had not completed high school, 8.7 percent among high school graduates, 6.3 percent among persons who had completed some college but were not graduates, and 3.2 percent among college graduates (see table 12). The link between education and disability was also observable among the 65 years old and over population. Among members of this age group, the proportion with a severe disability was 44.7 percent among those who had not finished high school and 20.0 percent among those who had finished college (see table 13).

LOW-INCOME STATUS AND DISABILITY

Persons with low incomes are more likely to have disabilities than persons with high incomes. The income measure used in this study is the ratio of family income (personal income is used if the person is not a family member) in the month preceding the interview to a low-income threshold that is equal to one-twelfth of the official annual poverty threshold for a family of the specified size and composition. Among persons 15 to 64 years of age, the proportion with a severe disability was 16.7 percent among persons with an income to threshold ratio below 1.00, 14.7 percent among those with a ratio from 1.00 to 1.49, 10.1 percent among those with a ratio from 1.50 to 1.99, 7.4 percent among those with a ratio from 2.00 to 2.99, 5.4 percent among those with a ratio from 3.00 to 3.99, and 3.3 percent among those with a ratio of 4.00 or higher (see figure 5 and table 12). A similar relationship held for persons 65 years old and over. Within this group, the proportion with a severe disability was 53.0 percent among those with a ratio less than 1.00, and 22.8 percent among those with a ratio of 4.00 or higher (see table 13).

EMPLOYMENT AND DISABILITY

The employment status of persons with disabilities is a matter of critical importance, both in terms of public expenditures and in the right of persons with disabilities

to participate fully in the labor market. Table 24 presents data on the employment status of persons 21 to 64 years of age by disability status.

Previous studies have primarily focused on the relationship between work disability and employment status. Work disability status, as measured in SIPP, March Current Population Surveys, and the past three decennial censuses, is determined by asking if a person has a condition that "limits the kind or amount of work" that can be done or "prevents the person from working at a job or business." Studies show that work disability status, as measured in this way, is strongly associated with labor force status, earnings levels, and other characteristics. In spite of these findings, however, it ought to be noted that work disability status is an ambiguous concept. The work disability question implies that the only factor affecting the ability to work is the condition of the person. This is clearly not the case. Under one set of environmental factors, a given condition may hinder or prevent work, but if physical and/or social barriers are removed, the same condition may have no effect on the ability to work. The data in table 24 show the relationship between work disability status and employment status, but they also show the relationship between a full array of disability measures and employment status.

The data show that having a disability that is not severe reduces the likelihood of being employed by a rather small amount, and having a severe disability reduces the likelihood by a very great amount (see figure 6). Among males, the employment rate was 88.8 percent for persons with no disability, 83.9 percent for persons with a disability that was not severe, and 23.9 percent for persons with a severe disability. The comparable rates among females were 72.6 percent, 67.3 percent, and 22.7 percent (the rate for females with a severe disability was not statistically different from the rate for males with a severe disability).

Among both sexes, the employment rate for persons with no disability was 80.5 percent, but the rate was 27.6 percent for persons with a severe functional limitation, and 20.6 percent for persons who need personal assistance with an ADL or IADL.

The potential value of the data presented in table 24 is that, over time, data on changes in the employment rate for persons with specific disabilities (e.g., difficulty seeing, hearing, or walking, or a user of a wheelchair) would provide a measure of the extent to which employment barriers had been reduced. A problem with the use of SIPP data for this purpose is the relatively small sample size of the survey. The sample of 30,000 households upon which this study is based is about half as large as the sample size for the Current Population Survey. Changes in employment and earnings would have to be relatively large before they could be described as statistically significant.

The data in table 25 show the distribution of employed persons by disability status. Persons with a disability made up 13.4 percent of all employed persons (those

Figure 5.
Percent of Persons 15 Years Old and Over With Low Incomes, by Age and Disability Status: 1991-92

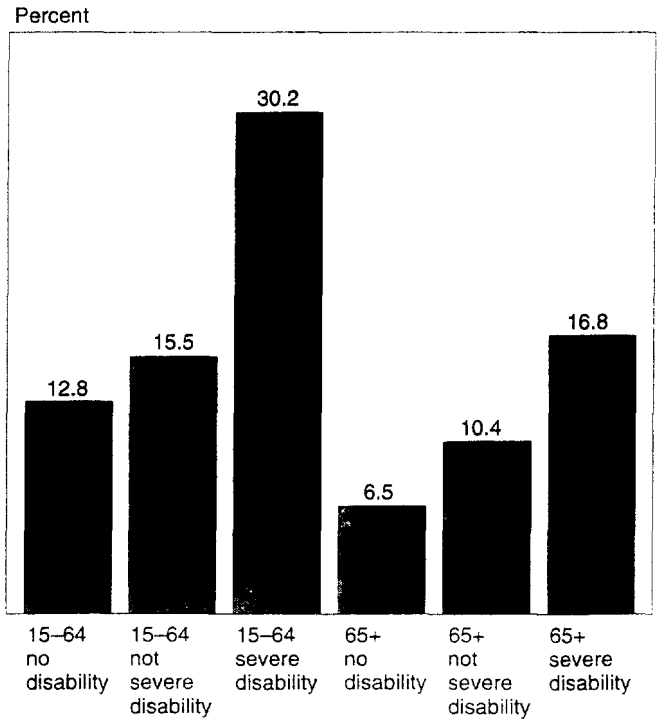


Figure 6.
Percent of Persons 21 to 64 Years Old With a Job or Business, by Sex and Disability Status: 1991-92